

SECTION 611 CATTLE GUARDS

611.01 DESCRIPTION. This work is furnishing and installing cattle guards or removing and resetting cattle guards.

611.02 MATERIALS.

611.02.1 Concrete. Furnish air-entrained Class "A" portland cement concrete meeting Section 551 requirements for poured-in-place base concrete.

Furnish Class "D" portland cement concrete meeting Section 551 requirements for precast bases.

611.02.2 Steel. Furnish reinforcing steel meeting Subsection 711.01 requirements. Furnish low-alloy weldable steel meeting ASTM A 572 (A 572M), Grade 45 (300 MPa) requirements for crossbars.

Furnish other steel meeting Section 711 requirements.

611.02.3 Paint. Furnish paint meeting the following requirements:

A. Shop (Prime Coat) Subsection 710.02(B)7

B. Aluminum Paint (Finish Coat) Subsection 710.02.(B)2

611.02.4 Prefabricated Cattle Guards. Furnish standard pre-fabricated cattle guards meeting Standard H-20 (M 518) loading that have cleanouts. Submit for approval all fabrication details before fabrication and footing elevations are set.

611.03 CONSTRUCTION REQUIREMENTS.

611.03.1 Excavation. Excavate cattle guard foundations to the specified depth allowing space for formwork.

Complete and compact earth fills meeting Section 203 requirements before excavating for the cattle guard foundation.

611.03.2 Placing Concrete Bases. Construct poured-in-place concrete bases meeting Section 552 and the Detailed Drawings.

Furnish precast concrete bases meeting Section 554 requirements and the Detailed Drawings.

Construct stringer bearing surfaces to provide full bearing under each stringer. Bushhammer uneven surfaces to provide even bearing.

611.03.3 Placing Cattle Guards. Fasten the metal structure to the base as specified.

Attach the metal wings to the cattle guard and to the fence as shown in the Detailed Drawings.

All welding must meet the requirements of Subsection 556.03.10.

Backfill and clean up around the completed structure.

611.03.4 Painting. Apply one shop coat of primer to all metal parts. Apply a prime coat and a finish coat in the shop or in the field.

Perform all painting meeting the applicable requirements of Section 612.

Re-paint damaged painted surfaces at Contractor expense.

611.03.5 Re-setting Cattle Guards. Dismantle and reset existing cattle guards at the locations specified in the Contract.

611.04 METHOD OF MEASUREMENT. New and re-set cattle guards are measured by the unit, including the concrete bases, excavation and backfill.

611.05 BASIS OF PAYMENT. Payment for the completed and accepted quantities is made under the following:

<u>Pay Item</u>	<u>Pay Unit</u>
New Cattleguard	Each
Reset Cattleguard	Each

Payment at the contract unit price is full compensation for all resources necessary to complete the item of work under the Contract.